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ABSTRACT

Emphasis in the Jennings, Missouri, Learning Laboratory Program is placed on improving reading and language arts skills by first diagnosing and assessing the disability and then developing an individually prescribed program in which the student can utilize his strengths and remedy his weaknesses. With the goal of improving the English-reading skills of 130 kindergarten through twelfth grade students, the special project team located in the central learning laboratory and four diagnostic centers involves these personnel: laboratory coordinator, learning specialist, clinical psychologist, social worker, counselors, interns, diagnostic teachers, and instructional aides. An inservice training program is conducted to instruct seven English teachers annually in methods of diagnosing and prescribing programs for children with learning deficiencies as well as providing these teachers with methods for helping the students to overcome their learning problems in reading. Continual evaluation of student progress and staff techniques is made while the program is being carried out. The success of the program as a whole is measured through the use of pretests and posttests designed to determine the extent to which project goals have been met. (WR)

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JENNINGS, MISSOURI LEARNING LABORATORY

TITLE III-ESEA

Project No. 35-71-06-1

School District of Jennings
8866 Cozzens Avenue
Jennings, Missouri 63136

FINAL REPORT: SECOND YEAR

July 1, 1972 - June 30, 1973

Submitted by

Ralph A. Huesing, Coordinator
August, 1973

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I SUMMARY

A wide range of diagnostic and remedial services characterizes the Jennings, Missouri Learning Laboratory Program. Designed to focus on those students whose learning disabilities impede their progress in the broad areas of communication and problem-solving, the learning laboratory utilized an eclectic approach by bringing many disciplines to bear on the various kinds of learning problems. Emphasis is placed on improving reading and language arts skills by first locating and defining (diagnosing and assessing) the disability and then developing an individually prescribed program whereby the student can utilize his strengths and improve his weaknesses.

With the goal of improving the English-reading skills of 130 K-12 students, the special project team located in the central learning laboratory and four diagnostic centers involves these personnel: laboratory coordinator, learning specialist, clinical psychologist, social worker, counselors, interns, diagnostic teachers and instructional aides. In addition, regular school personnel and others, such as nurses, student teachers, tutors and university consultants are involved in a coordinated effort to lead those students who are performing below grade level to become more productive, successful citizens.

An inservice training program is conducted to instruct seven (7) English teachers annually in methods of diagnosing and prescribing programs for children with learning deficiencies as well as providing these teachers with methods for helping the students to overcome their learning problems in reading. The educational cycle will come full circle with the involvement of parents in improved child-parent-teacher communications.

Continual evaluation of student progress and staff techniques is made during the duration of the program. The success of the program as a whole will be measured through a pretest posttest

design to determine the extent to which the following five goals of the project have been met:

1. Improve the attitudes and teaching techniques of seven English teachers.
2. Improve the reading comprehension skills of 40 elementary students by a mean score of .6 of a school year.
3. Improve the reading comprehension skills of 30 junior high students by a mean score of .9 of a school year.
4. Improve the reading comprehension skills of 60 senior high students by a mean score of one year.
5. Improve certain personality characteristics (greater emotional stability, more conscientiousness, better able to follow rules) of 130 underachieving students in grades K through 12. The mean gain in each of the characteristics should be 1/2 Standard Deviation closer to the standardized mean.

II EVALUATION

A. Objective I

To improve the English reading skills of 60 underachieving high school students (grades 10-12) by an average gain of at least one year during the 1972-73 school year.

1. Activities for Objective I:

Several activities were utilized in attempting to accomplish this objective. Three groups were totally individualized while two other groups received individualized instruction during one-half the class period each day.

Listed below are the activities that were used in the groups that were totally individualized:

- Teachers aided students to develop a larger sight vocabulary through the following methods as appropriate:
- placing unfamiliar words on 3 x 5 cards for study
- using the 3 x 5 cards in "card game" situations for study
- assigning written stories and paragraphs using the vocabulary words from the cards
- using tachistoscopic devices to review words
- discussing vocabulary definitions through a study of root words and word origins
- regular exercises in vocabulary study from materials such as Be a Better Reader, Reading for Meaning, Tactics in Reading, and Audio-Reading Progress Laboratory vocabulary exercises.
- the teachers used a wide variety of commercially printed and taped materials to teach specific reading and grammar skills in which the students showed deficiencies, continually evaluated their

progress, then had students practice these skills with actual classroom assignments.

- paperback books were used to stimulate interest in reading, to provide relevant topics for discussion, and to teach reading, grammar, and literary analysis skills.
- group sharing of novel "Catcher in the Rye" to practice reading skills learned and to practice group discussion techniques
- audio-visual materials (films, records, tapes) supplemented a number of units of work in literature
- high school students tutored elementary school students to reinforce skills that they had previously learned

Listed below are the activities that were used in the groups that were partially individualized:

- Lists of new and unfamiliar words were developed to improve vocabulary, spelling and reading skills.
- The Action series was used to improve reading, vocabulary and reference skills.
- Novels were read that related to the students' personal life and problems.
- Used the Turner-Livingston Communication Series to improve reading and background information.
- The Scholastic Literature Series, Moments of Decision, was used to learn to make decisions. Books were selected to observe how other characters made their decisions. This was followed with group discussions of the decision-making process.
- The Contact units of Loyalties, Maturity, and Getting Together were used to evaluate self, relation with family and friends, and to help adapt better to school and society. This was

followed with group discussions, the reading of short stories and finally followed with the use of records and posters to stimulate compositions.

- The Activity Concept English program was used to develop both reading and listening skills with emphasis on the latter.
- To improve reading and to explore vocations, the Turner-Livingston Career Series was used.

2. Evaluations for Objective I:

The senior high school students were evaluated by the Iowa Test of Educational Development in a pretest-posttest design. There was a mean gain in reading achievement of 1.9 years in the groups that received totally individualized instruction ($t=2.40$; $df=16$; $p<.025$). A related t-test showed that this gain was significant. There was a mean gain in reading achievement of .9 years in the groups that received individualized instruction during one-half the class period each day. This gain was not found to be significant when assessed with a related t-test.

Table 1

Reading Achievement Test Results (in years) - Senior High Students

	N	Mean	SD
Groups receiving totally individualized instruction			
Pretest	17	7.0	1.80
Posttest	17	8.9	1.62
Groups receiving partially individualized instruction			
Pretest	48	7.4	2.41
Posttest	48	8.3	2.64

All of the students in the groups that received totally individualized instruction were willing to participate in the program on a voluntary basis. In contrast to the first year, all but one of the students were willing to have their parents involved. According to the students themselves, they were already familiar with the program in a general way and tended to be glad to participate since they felt that this program could assist them with the difficulties they were experiencing in the English class.

B. Objective II

The goal of this objective was to improve the reading skills of at least 30 underachieving junior high school students by an average gain of nine months during the 1972-73 school year.

1. Activities for Objective II:

- Classic comic books, abridged versions of books written by Jack London, as well as books and plays dealing with Negro subjects such as "Sounder" were used for motivational purposes.
- Vocabulary was selected from the content areas to be learned as sight words. Later, groups of these words were analyzed from a phonetic point of view.
- Stories as well as the comprehension questions were taped. The student was then asked to follow these selections visually in a previously prepared booklet.
- Students read selections orally and taped them. The student then listened to his recording, reread the selection, and finally answered the comprehension questions.
- Selections were used that required students to use context clues to assist them in comprehension. A selection would be read and then a question would be asked about an unfamiliar word used in the selection. The student would then be taught how to derive meaning from the word by obtaining context clues.

- For students that had very short attention spans, very small silent reading assignments were initially given. These were followed by a series of comprehension questions. Then silent reading assignments were increased 15 seconds per day until the student was able to cope with a regular length reading assignment with an adequate level of comprehension.

2. Evaluations for Objective II:

The junior high school students were evaluated with the S.R.A. Achievement Test in a pretest-posttest design. There was a mean gain of 3.2 years in junior high students' reading achievement. A related t-test showed this gain was significant ($t=7.68$; $df=44$; $p<.001$).

Table 2

Reading Achievement Test Results (in years) - Junior High Students

	N	Mean	SD
Pretest	45	5.4	1.42
Posttest	45	8.6	2.38

As can be noted in Table 10, the students at both the junior and senior high school levels showed a more significant mean gain in reading achievement than those in the elementary school as was true during the first year of the project. Two factors appear to have contributed to this difference in performance. First of all, the students at both the junior and senior high levels that were originally selected showed a greater discrepancy between their potential and actual reading achievement than those selected at the elementary school level. Therefore there was a need to decrease a larger gap. It may be that it would be more difficult to close this narrower gap. Secondly, another very important factor according to Boyd D. McCandless in his book entitled Adolescents; Behavior and Development must be taken into consideration.

Elementary school students that are not successful in school become discouraged by the time they reach the third grade. The motivation tends to decrease sharply for the unsuccessful student at age 8. However the adolescent shows a high level of generalized drive. If this heightened drive is taken advantage of, it is possible for dramatic improvement in learning to occur. According to McCandless, the adolescent period may actually be the last change that one usually has to motivate a student to perform according to his potential. It could be that most of the secondary school students were motivated through this project and heightened their generalized drive to perform more satisfactorily which might account for the high level of reading growth at both the junior and senior high levels.

C. Objective III

The goal of this objective was to improve the reading of 40 underachieving elementary students by an average gain of six months in the area of reading during the 1972-73 school year.

1. Activities for Objective III:

- Neurological Impress Method for building oral reading fluency.
- Fernal Technique for developing sight vocabularies and improving spelling.
- Allowing a peer to ask the reader questions about what was just read so as to build comprehension skills.
- Teacher-made and DLM tapes were used with individual earphones to build auditory skills such as discrimination.
- Distar techniques and materials were used to enhance language development.
- i.t.a. materials were used in an individualized reading program for building word attack skills.
- Language experience stories and techniques were used to develop the understanding that stories are "written talking".

2. Evaluation for Objective III:

The elementary school students were evaluated in a pretest-posttest design utilizing the following instruments:

Grade 1 - Wide Range Achievement Test
Grades 2-6 - Iowa Test of Basic Skills

There was a mean gain of 1.3 years in elementary students' reading achievement. A related t-test showed this gain was significant ($t=3.51$; $df=45$; $p<.005$).

Table 3

Reading Achievement Test Results (in years) - Elementary School Students

	N	Mean	SD
Pretest	46	1.9	1.12
Posttest	46	3.2	1.14

The major focus during the second year of the project was to investigate what was needed to further increase the elementary reading achievement growth. This was accomplished through consulting with faculty members at the University of Missouri, Columbia, as well as through the reading of journals and books in the area of learning disabilities. Two factors seemed to become apparent - (1) More detailed evaluations of the elementary students needed to be made in order to more specifically determine modality strengths as well as learning styles; and (2) More varied types of reading materials needed to be available so that each elementary student could work with materials that tapped the above. It was for this reason that the Distar and i.t.a. approaches were initiated as they supplemented the already existing approaches of phonics, linguistics, sight, and language experience. Since the mean reading achievement gain at the elementary level was found to be significant ($p<.005$), it is felt that the investigations proved to be beneficial.

D. Objective IV

The aim of this objective was to provide inservice training for one semester of 20 weeks for 14 regular secondary classroom teacners in the areas of assisting students with learning disabilities and remedial English/reading. Six of these will be regular senior high classroom teachers while eight of these will be regular junior high classroom teachers.

1. Activities for Objective IV:

- Each teacher was assigned to meet with the Learning Specialist a minimum of once each week for one hour. Discussions about the individual student's academic and personality strengths, weaknesses, and needs were discussed.
- The Learning Specialist observed the teachers during the periods of instruction. These observations were followed by a discussion about the procedures and methods used.
- The teachers were introduced to new techniques and materials that were used as alternates to the process previously used in order to meet the needs of the individual students.

2. Evaluation for Objective IV:

In conjunction with the University of Missouri-St. Louis, a pretest-posttest design utilizing The Personal Beliefs Inventory was administered to measure three areas. There was a mean decrease in Part I - Agreement with Dewey's philosophy of pragmatism (experimentalism)- of .6 raw score points. This decrease was not found to be significant when assessed with a related t-test.

There was a mean gain in Part II - Practicing Dewey's philosophy of pragmatism (experimentalism) - of 1.7 raw score points. This increase was not found to be significant when assessed with a related t-test.

There was a mean gain in Part III - Becoming more open-minded - of 1.8 raw score points. This increase was

not found to be significant when assessed with a related t-test.

Table 4

Personal Beliefs Inventory Results (raw score) - In-service Teachers

	N	Mean	SD
Part I - Agreement with Dewey's philosophy of pragmatism (experimentalism)			
Pretest	8	139.5	22.46
Posttest	8	138.9	24.87
Part II - Practicing Dewey's philosophy of pragmatism (experimentalism)			
Pretest	8	160.4	18.74
Posttest	8	162.1	19.07
Part III - Becoming more open-minded			
Pretest	8	147.3	23.46
Posttest	8	149.1	22.29

Although no significance was noted in teacher attitudes as measured by the Personal Beliefs Inventory, greater involvement on the part of the in-service teachers was noted during the second year of the project. In addition to this, they met on frequent occasions to discuss alternate ways in which to assist students in their regular classes and used the appropriate materials as had been discussed with them. One factor that could account for the lack of significance was due to the fact that on the pretest measure all the in-service teachers had already scored above the norms in each part. Nevertheless, much attention will be given to this matter during the third year to help insure a more effective in-service program.

E. Objective V

The aim of this objective was to improve certain personality characteristics (greater emotional stability, more conscientious, better able to follow rules) of 60 underachieving high school students during the 1972-73 school year. The mean gain in each of the characteristics should be 1/2 Standard Deviation closer to the Mean.

1. Activities for Objective V:

- Individual personal counseling
- Individual academic counseling
- Success oriented lessons
- Individually prepared lessons
- Positive rather than negative feedback

2. Evaluations for Objective V:

The senior high school students were evaluated with the High School Personality Questionnaire in a pretest-posttest design in an attempt to determine the standing on several personality dimensions. A related t-test showed that the mean changes in the attitudes listed below all were significant.

Table 5

Personality Changes of Participating Senior High Students (sten scores)
Completely Individualized

Factor	N	Mean	SD
A -(Reserved---------Warmhearted)			
Pretest	16	4.81	1.81
Posttest	16	5.71	1.44
D -(Inactive--- ---------Active)			
Pretest	16	4.94	1.30
Posttest	16	6.19	1.78
H -(Shy-------------Adventurous)			
Pretest	16	4.19	1.70
Posttest	16	5.88	1.36
I -(Tough-minded---------- ----------Tender-minded)			
Pretest	16	4.00	1.84
Posttest	16	5.38	1.76

Factor A -(Reserved----------Warmhearted)

Initially the senior high students who received completely individualized instruction were slightly below average on Factor A suggesting tendencies toward aloofness, being critical, distrustfulness, and rigidity. On the pretest measure, they were still within the "average range" but were significantly higher in score on the posttest measure ($t=2.03$; $df=15$; $p<.05$), suggesting greater flexibility, access to emotions, and trust.

Factor D -(Inactive---------Active)

A significant increase on Factor D ($t=3.18$; $df=15$; $p<.005$), while within the average range, suggests a movement toward greater impulsiveness. Along with the increase in Factor A, there is an impression of more easygoing acceptance of emotions and perhaps greater willingness to act on the basis of these emotions, and perhaps a decrease in "neurotic" behavior.

Factor H - (Shy----------Adventurous)

This impression received some support from the significant increase in scores on Factor H ($t=3.01$; $df=15$; $p<.005$). This change implies a movement from threat sensitivity, timidity, and impeded self-expression toward greater impulsiveness and social participation.

Factor I - (Tough-minded--------tender-minded)

Similarly a significant increase on Factor I ($t=2.20$; $df=15$; $p<.025$) implies a change from a "tough, masculine, no-nonsense" orientation which is a strong negative predictor of school achievement. This shift may also have involved a change in expectation for positive interactions with others.

The overall pattern appears to suggest a change in the direction of greater trust and acceptance of self and others, greater flexibility and expecting more positive interpersonal relations.

Table 6

Personality Changes of Participating Senior High Students (sten scores)
(Partially Individualized)

Factor	N	Mean	SD
C -(Emotional Instability------- -------Emotional Stability)			
Pretest	26	5.35	1.63
Posttest	26	6.19	1.56
I -(Tough-minded---------- ----------Tender-minded)			
Pretest	26	4.92	1.74
Posttest	26	5.85	2.62

Factor C - (Emotional Instability------
-----Emotional Stability)

For one of the groups of senior high students that received partially individualized instruction, a significant increase on Factor C ($t=2.06$; $df=25$; $p<.025$) was noted suggesting tendencies toward greater ego strength as well as a greater capacity for frustration tolerance.

Factor I - (Tough-Minded--------tender-minded)

As with the senior high students who received completely individualized instruction a significant increase on Factor I ($t=2.11$; $df=25$; $p<.025$) implies a change from a "tough, masculine, no-nonsense" orientation which is a strong negative predictor of school achievement. This shift may also have involved a change in expectation for positive interactions with others.

F. Objective VI

The aim of this objective was to improve certain personality characteristics (greater emotional stability, more conscientious, better able to follow rules) of 30 underachieving junior high school students during the 1972-73 school year. The mean gain in each of the characteristics should be 1/2 Standard Deviation closer to the Mean.

1. Activities for Objective VI:

- Individual personal counseling
- Individual academic counseling
- Success oriented lessons
- Individually prepared lessons
- Positive rather than negative feedback

*2. Evaluations for Objective VI:

The junior high school students were evaluated with the High School Personality Questionnaire in a pretest-posttest design in an attempt to determine the standing on several personality dimensions. A related t-test showed that the mean changes in the attitudes listed below all were significant.

Table 7

Personality Changes of Participating Junior High Students (sten scores)

Factor	N	Mean	SD
A -(Reserved---------Warmhearted)			
Pretest	43	4.57	2.18
Posttest	43	5.45	1.71
F -(Full of cares-------Cheerful)			
Pretest	43	4.86	1.79
Posttest	43	5.88	1.80
H -(Shy--------------Adventurous)			
Pretest	43	4.81	1.93
Posttest	43	5.83	1.94
Q4-(Relaxed---------------Tense)			
Pretest	43	4.62	1.83
Posttest	43	5.74	1.53

Factor A - (Reserved---------Warmhearted)

Initially the junior high students were slightly below average on Factor A suggesting tendencies toward aloofness, being critical, distrustfulness, and rigidity. On the pretest measure, they were still within the "average range" but were significantly higher in score on the

posttest measure (t=2.46; df=42; p<.01), suggesting greater flexibility, access to emotions, and trust.

Factor F - (Full of cares-------Cheerful)

This Factor F is described as a "load of care" factor with elements of cautiousness and seriousness. The students showed a significant (t=2.83; df=42; p<.005) movement away from the "load of care" suggesting possibly greater freedom and openness to self and others.

Factor H - (Shy----------Adventurous)

This impression received some support from the significant increase in scores on Factor H (t=2.85; df=42; p<.005). This change implies a movement from threat sensitivity, timidity, and impeded self-expression toward greater impulsiveness and social participation.

Factor Q4 - (Relaxed---------Tense)

A significant increase in Factor Q4 (t=2.73; df=42; p<.005) appears superficially to be a qualitatively negative change, in that it suggests greater tension. However, this factor is described as undischarged drive. Part of this may be due to the shift in modes of adjustment. Here the speculation may be offered that more mature behaviors have been developed, thus there was no rise in Factor O. However, the turmoil of maintaining the new mode of adjustment and of determining their effect may produce an elevation in undischarged drive. This interpretation that Factor Q4 and O may be related to developmental maturation is somewhat supported by there being no significant shift in either of these factors in the senior high groups.

G. Objective VII

The aim of this objectivewas to improve certain personality characteristics (greater emotional stability, more conscientious, better able to follow rules) of 40 underachieving elementary school students during the 1972-73 school year. The mean gain in each of the characteristics should be 1/2 Standard Deviation closer to the Mean.

1. Activities for Objective VII:

- Individual personal counseling
- Individual academic counseling
- Success oriented lessons
- Individually prepared lessons
- Positive rather than negative feedback

*2. Evaluations for Objective VII:

The elementary school students were evaluated with the Children's Personality Questionnaire in a pretest-posttest design in an attempt to determine the standing on several personality dimensions. A related t-test showed that the mean changes in the attitudes listed below all were significant.

Table 8

Personality Changes of Participating Elementary Students (sten scores)

Factor	N	Mean	SD
B - (Dull----------Bright)			
Pretest	43	5.15	1.91
Posttest	43	5.85	1.76
D - (Inactive----------Active)			
Pretest	43	6.50	1.67
Posttest	43	5.98	1.72
J - (Group Dependence-------- ---Circumspect Individualism)			
Pretest	43	5.02	2.05
Posttest	43	6.23	2.13
O - (Self-assured---------- ----------Apprehensive)			
Pretest	43	5.02	1.95
Posttest	43	5.85	2.01

Factor B - (Dull----------Bright)

A significant change toward "greater intelligence" ($t=2.03$; $df=42$; $p<.025$) may have little practical significance in that it represents a shift of less than ten IQ points.

Such finding is not uncommon in groups receiving remedial attention of an academic nature.

Factor D - (Inactive-------Active)

A significant change in the form of a decrease on Factor D ($t=1.68$; $df=42$; $p<.05$) suggests that the students gained in their ability to constructively direct and control their attention and showed a decreased reliance on negative, attention-seeking behaviors. Since a positive score on this factor may correlate negatively with school achievement, this would represent a qualitatively positive gain.

Factor J - (Group Dependence----------
---Circumspect Individualism)

Similarly the significant gain in Factor J ($t=3.22$; $df=42$; $p<.005$) represents a movement from "group depending" to greater self-sufficiency.

Factor O - (Self-assured-------Apprehensive)

A significant shift in Factor O ($t=2.69$; $df=42$; $p<.01$) suggests a movement toward greater guilt proneness, sensitivity and perhaps anxiety. However, this type of shift may be due to the abandoning of previously satisfying, although negative, modes of adjustment (as suggested by changes on Factor D and J), without, as of the posttest, having settled upon a more mature mode of adjustment.

* We acknowledge the assistance for interpretation of the personality measures from Dr. Robert McGilligan, Consulting Psychologist

III DISSEMINATION

An attempt to disseminate information about the Learning Lab is an ongoing process.

The teachers within the School District of Jennings were once again informed of the services provided by the Jennings Learning Lab through individual faculty presentations. Meetings were also conducted with parent groups as well as with the Learning Lab Council. Additionally articles were regularly featured in the "Jennings School District Bulletin" which were distributed to each resident. Also, a presentation was made at each monthly Jennings Board of Education meeting to keep the board members informed of the monthly progress of the program.

Information was disseminated outside the district through visitations of over 100 individuals and through publicity of events printed in the local community newspapers, the larger metropolitan newspapers, and in the newsletter of the Missouri Association for Children with Learning Disabilities. Copies of the final report for the first year of operation were sent to State Representative James Mulvaney, State Senator John Schneider, Senator Stuart Symington and Senator Thomas Eagleton, as well as to staff members from the school districts of Cape Girardeau, Hazelwood, Parkway and Riverview Gardens.

Furthermore, a workshop was conducted by the Learning Lab staff members for the special services teachers of the Ladue School District. In addition, the staff participated in panel presentations conducted at the Mirism School in Webster Groves for the parents of handicapped preschool children and also for a meeting conducted by the St. Louis Council of the Missouri Association for Children with Learning Disabilities.

IV RECOMMENDATIONS

Of the eight (8) recommendations made to the school district last year, six (6) of them have been adopted. Following is a list of the recommendations for the coming school year:

1. A comprehensive preschool program is needed to detect learning problems so that the parents can be assisted in providing the necessary experiences to help prevent the child from becoming a school failure.
2. More time needs to be available for counselors to help students deal with their social-emotional problems.

Table 9

Student Participation

School	Referrals	*Inappropriate	In Process	Accepted	Other Placement	Collaboration with Other Agencies	Released June 1973
Fairview Elementary	40	4	3	20	13(a)	0	1
Northview Elementary	20	3	0	24	6(b)	3(c)	2
Woodland Elementary	7	2	1	8	2(d)	0	3
Fairview Junior High	38	20	1	25	2(e)	1(f)	20
Jennings Junior High	2	0	0	18	1(g)	2(h)	6
Jennings Senior High	7	3	0	17	0	0	10
TOTAL	114	32	5	112	24	6	42

*The numbers include students who either have emotional problems as a basis for the learning disorder, have below average intelligence, and/or too high reading achievement in relation to their ability and/or grade placement.

Table 9 (continued)

(a) Fairview Elementary	1 to Edgewood Children's Center (for the emotionally disturbed - residential care)
	8 to Special District, Emotionally Disturbed Program
	2 to Special District, Educable Mentally Retarded Program
	2 to clinical psychologist for treatment
(b) Northview Elementary	1 to Edgewood Children's Center (for the emotionally disturbed)
	1 to Special District, Learning Disabilities Program
	3 to Special District, Emotionally Disturbed Program
	1 to Family and Children's Service for counselling
(c) Northview Elementary	2 to clinical psychologist for treatment
	1 to Jewish Hospital, Speech and Hearing Clinic
(d) Woodland Elementary	1 to Special District, Educable Mentally Retarded Program
	1 to Special District, Emotionally Disturbed Program (itinerant assistance)
(e) Fairview Junior High	2 to Special District, Educable Mentally Retarded Program
(f) Fairview Junior High	1 to Juvenile Court - Change of custody of parents
(g) Jennings Junior High	1 to Special District, Visually Impaired Program
(h) Jennings Junior High	1 to Juvenile Court - Counselling for drug problem
	1 to Juvenile Court - Truency

Table 10

Reading Comprehension Improvement

Levels	Number of Students	Average Gain in Years	Statistically Derived Average Gain in Years
Elementary	46	+1.3	+2.2
Junior High	45	+3.2	+6.0
Senior High (Completely Individualized)	17	+1.9	+2.2
Senior High (Partially Individualized)	48	+ .9	+ .9

It must be noted in this table that more than 108 students have participated in the Learning Lab Program. Table 9 enumerates precisely the number of participants for the 1972-73 school year.

The average gain column indicates the differences on test scores in reading achievement according to standardized tests.

The statistically derived average gain is based upon two factors of statistics. One is the regression equation which incorporates the idea of adding months of growth to the pretest score for all individuals that were not included in the program in September. Thus an allowance is made for additional reading growth for each month during the time period of the pretesting in September and the actual admittance of the student into one of the diagnostic classrooms. As a result the newly derived score becomes the basis for determining the statistically derived

pretest score. The second statistical factor which is taken into consideration in this column is one in which an average monthly gain in reading comprehension per pupil is calculated from the difference between the actual posttest score and the derived pretest score. Then the average monthly gain is multiplied by 10 for the number of actual months in the school year. This new figure then makes it possible to assess each student's reading growth on the assumption that he was in the program for the complete school year.

List of References

Aukerman, Robert C. Approaches to Beginning Reading, John Wiley & Sons, Inc., New York, 1971

Bond, Guy L. and Tinker, Miles A. Reading Difficulties: Their Diagnosis and Correction, Appleton-Century-Croft, New York, 1967

Brown, Bob Burton, The Experimental Mind in Education, Harper Rowe, New York, 1968

Cattell, Raymond B., Research Professor in Psychology, University of Illinois, and Cattell, Mary D. L. Handbook for the Jr-Sr. High School Personality Questionnaire "HSPQ", Institute for Personality and Ability Testing, Champaign, Illinois, 1969

Guilford, J. P. Fundamental Statistics in Psychology and Education, 4th edition, p. 184, McGraw Hill, New York, 1965

McCandless, Boyd R., Hinsdale, Illinois Adolescents: Behavior and Development, Dryden Press, 1970

Myers, Patricia I. and Hammill, Donald D. Methods for Learning Disorders, John Wiley & Sons, Inc., New York, 1969

Rokeach, Milton The Open and The Closed Mind, Basic Books, New York, 1960

APPENDIX A
A BEHAVIORAL RATING SCALE

Name_____ Age____ Grade_____

Teacher_____ Date_____

If the child exhibits a behavior below, please check in the appropriate space.

If he does not exhibit the behavior, leave it blank.

	Generally	Sometimes
Visual Perception		
1. Unable to match identical patterns and/or symbols		
2. Unable to reproduce patterns and/or symbols		
3. Unable to put puzzles together		
4. Unable to follow a line in cutting		
5. Ignores punctuation marks when reading		
6. Adds letters when copying words		
7. Leaves out letters when copying words		
8. Confuses similar letters and words (b & d, p & q, what and when, etc.) when reading		
9. Makes reversals (was - saw)		
10. Right to left writing and/or reading		
11. Distracted by ordinary visual movements in the room		
12. Unable to write on line		
13. Unable to recognize colors		
14. Unable to point and count on one to one relationship		
Auditory		
1. Unable to follow oral directions		
2. Asks questions about something that was just said		
3. Substitutes similar sounding letters in spelling		
4. Unable to recall a sequence of items given orally		
5. Distracted by irrelevant sounds		
6. Difficulty distinguishing between everyday sounds		
7. Unable to tell from which directions sounds come		
Language		
1. Lack of adequate speaking vocabulary		
2. Unable to explain what he apparently knows		
3. Unable to follow a sequence of events or directions given orally		
4. Omitting words while speaking		

APPENDIX A (cont'd)

	Generally	Sometimes
Concepts		
1. Unable to categorize similar items		
2. Unable to apply a principle to a related situation (3 x 4 = 12; 12 - 4 = ?)		
Social Emotional		
1. Kicking-biting-aggitating others		
2. No self-control; talks to self, wanders around room		
3. Temper tantrums		
4. Nervous behavior (e.g. thumb sucking; nail biting)		
5. Daydreaming -- gazing out window		
6. Low frustration level -- gives up easily		
7. Unable to adjust to change of routine		
8. Making unusually frequent trips to the lavatory and/or drinking fountain		
9. Consistently seeking teacher attention and/or reassurance		
10. Unwilling to participate in indoor and/or outdoor group activities		
11. Excessive movements, squirming, fidgetting		
12. Unable to take turns, interrupting		